

What Is Claimed Is:

1. A circuit arrangement to which the motor vehicle electric system supply voltage ( $V_{BAT}$ ) is applied and which, for briefly maintaining at least one internal normal d.c. voltage ( $V_{CC1,...}$ ) for electronic circuits in the event of failure of the vehicle electric system supply voltage ( $V_{BAT}$ ), comprises the following components:

a reserve energy accumulator (3) to which a charging voltage higher than the at least one internal normal d.c. voltage ( $V_{CC1,...}$ ) is applied during regular operation and which, in the event of failure of the vehicle electric system supply voltage ( $V_{BAT}$ ), delivers a reserve voltage ( $V_{RES}$ ) with which operation of at least some electronic circuits can be maintained (emergency operation) for a limited period of time, and

at least one step-down regulator (7,...) which steps down the input direct voltage ( $V_{ZP}$ ) applied to it to the at least one internal normal d.c. voltage ( $V_{CC1,...}$ ),

wherein in regular operation the supply direct voltage is applied directly as a charging voltage to the reserve storage energy accumulator (3) and is also applied as the input direct voltage ( $V_{ZP}$ ) to the step-down regulator (7,...).

2. The circuit arrangement as recited in Claim 1,

wherein the reserve voltage ( $V_{RES}$ ) delivered by the reserve energy is applied directly as input direct voltage ( $V_{ZP}$ ) to the at least one step-down regulator (7,...) in an emergency.

3. The circuit arrangement as recited in Claim 1 or 2,

wherein the reserve voltage ( $V_{RES}$ ) delivered by the reserve energy accumulator (3) is applied to an upstream step-down regulator (11) which derives therefrom the input direct voltage ( $V_{ZP}$ ) for the at least one step-down regulator (7,...).

4. The circuit arrangement as recited in Claim 3,

wherein the upstream step-down regulator (11) is a switching regulator, and the at least one step-down regulator (7,...) which delivers the at least one internal normal voltage ( $V_{CC1,...}$ ) is a linear regulator.

5. The circuit arrangement as recited in Claim 1,

wherein, for maintaining a plurality of internal normal d.c. voltages ( $V_{CC1}$ ,  $V_{CC2}$ ,  $V_{CC3},...$ ), it

includes a plurality of step-down regulators (7, 8, 9) to which the power supply direct voltage is applied as input direct voltage ( $V_{ZP}$ ) during regular operation, each step-down regulator stepping down this input direct voltage to one of the plurality of internal normal d.c. voltages ( $V_{CC1}$ ,  $V_{CC2}$ ,  $V_{CC3}$ ,...) for a group of electronic circuits.

6. The circuit arrangement as recited in Claim 4, wherein the reserve voltage ( $V_{RES}$ ) delivered by the reserve energy accumulator (3) is applied directly as input direct voltage ( $V_{ZP}$ ) to the plurality of step-down regulators (7, 8, 9) in an emergency.

7. The circuit arrangement as recited in Claim 4 or 5, wherein the reserve voltage ( $V_{RES}$ ) delivered by the reserve energy accumulator (3) is applied to an upstream step-down regulator (11) which derives therefrom the input direct voltage ( $V_{ZP}$ ) for the plurality of step-down regulators (7, 8, 9).

8. The circuit arrangement as recited in Claim 7, wherein the upstream step-down regulator (11) is a switching regulator, and the plurality of step-down regulators (7, 8, 9) which deliver the multiple internal normal d.c. voltages ( $V_{CC1}$ ,  $V_{CC2}$ ,  $V_{CC3}$ ,...) are linear regulators.

9. The circuit arrangement as recited in one of the preceding claims, wherein the reserve energy accumulator (3) is a capacitor.